

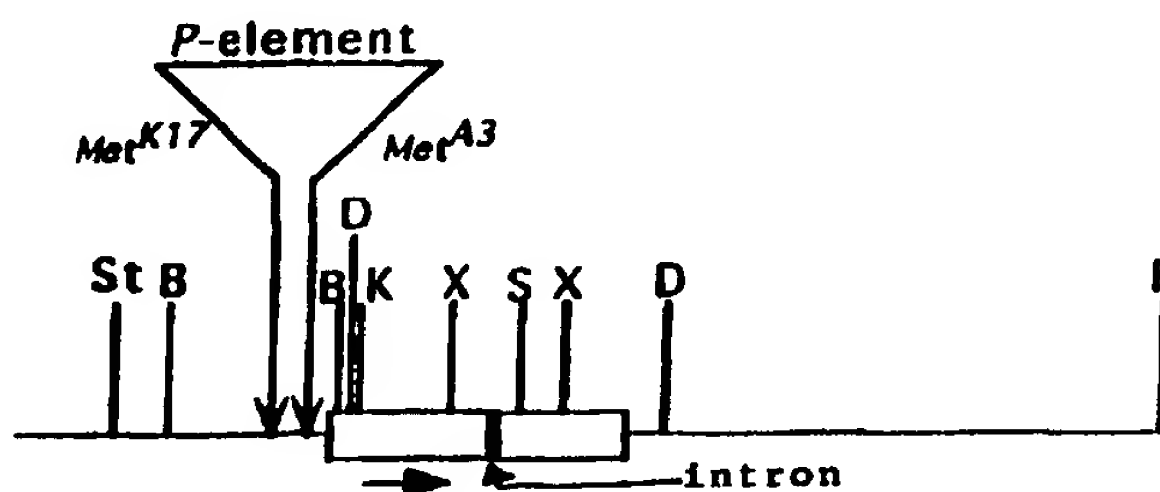


## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

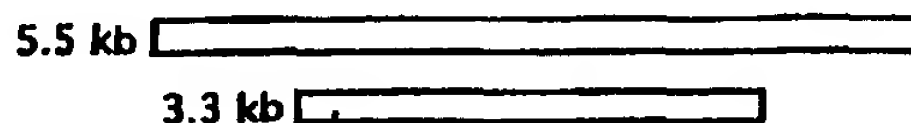
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(54) Title: RECOMBINANT bHLH-PAS/JHR POLYPEPTIDE AND ITS USE TO SCREEN POTENTIAL INSECTICIDES

## Genomic region

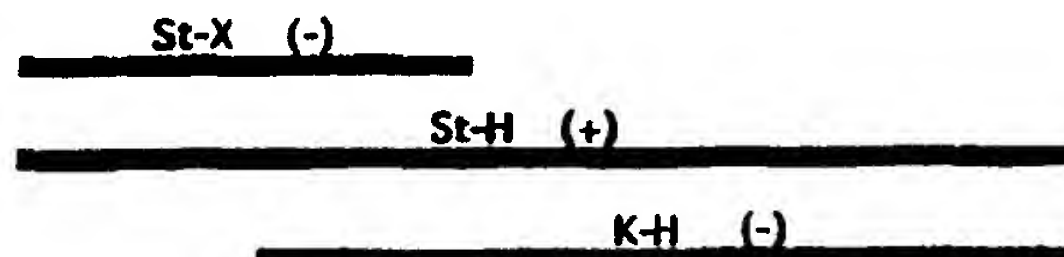


## Transcripts



## Transformation fragments

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## (57) Abstract

Promising groups of environmentally-safe insecticides consist of analogues of insect hormones, such as juvenile hormone, and antagonists of such hormones. The traditional bioassay approach for screening potential juvenile hormone analogs and antagonists is slow, expensive and inefficient. A recombinant bHLH-PAS-juvenile hormone receptor, isolated from the methoprene-tolerant locus on *Drosophila*, provides the basis of in vitro and in vivo binding assays that can be used to discover new juvenile hormone-type targeted insecticides. Moreover, the nucleotide sequence of the *Drosophila* bHLH-PAS/JHR polypeptide provides tools for isolating juvenile hormone receptor genes from other insect species.

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